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(71)Applicant : TORAY IND INC

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### (54) OLEFINIC NONWOVEN CLOTH AND ALKALI SECONDARY CELL SEPARATOR

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a separator suitable for an alkali secondary cell capable of making an electric cell have a large capacity by making a nonwoven cloth comprising an ethylene- $\alpha$ -olefin copolymer hydrophilic by a method of a radiation graft polymerization, a plasma graft polymerization, etc.

SOLUTION: This olefinic nonwoven cloth is obtained by melt blowing an ethylene- $\alpha$ -olefin copolymer obtained from a copolymerization of ethylene with an  $\alpha$ -olefin such as 1-octene and having 0.7-7 mol.%, preferably 0.2-3 mol.% of  $\alpha$ -olefin content to obtain a melt blown nonwoven cloth having 1-10  $\mu$ m, preferably 2-7  $\mu$ m average fiber diameter and  $\geq 0.6$  kg/m<sup>2</sup>, preferably  $\geq 0.6$  kg/5 cm<sup>2</sup> nonwoven cloth strength. The resultant nonwoven cloth is dipped in a mixed solution of acrylic acid with methacrylic acid and treating with a radiation induced graft polymerization or a plasma graft polymerization to impart hydrophilicity of  $\geq 250\%$  liquid holding fraction.